Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (original): A method of fabricating an image sensor, comprising:

forming a bottom antireflection coating over an exposed surface of an active image sensing device structure;

forming a color filter array on the bottom antireflection coating; and

substantially removing exposed portions of the bottom antireflection coating.

Claim 2 (original): The method of claim 1, wherein the bottom antireflection coating comprises a dyed organic film-forming material.

Claim 3 (original): The method of claim 1, wherein the bottom antireflection coating comprises a light-absorbing polymeric film-forming material.

Claim 4 (original): The method of claim 1, wherein the bottom antireflection coating has a thickness selected to improve an optical transmission characteristic of one or more colors of the color filter array.

Claim 5 (original): The method of claim 1, wherein the bottom antireflection coating is substantially transmissive to radiation in a wavelength range of about 400 nm to about 700 nm.

Claim 6 (original): The method of claim 1, wherein the color filter array comprises a plurality of colored photoresist structures.

Claim 7 (original): The method of claim 1, wherein exposed portions of the bottom antireflection coating are removed substantially by a plasma etch process.

Claim 8 (original): The method of claim 7, wherein the plasma etch process is a low-power buffered oxygen ash process.

Claim 9 (original): The method of claim 7, wherein the plasma etch process removes the bottom antireflection coating at a substantially higher etch rate than the color filter array.

Claim 10 (original): The method of claim 1, wherein the bottom antireflection coating forms a substantially continuous layer over the exposed surface of the active image sensing device structure before exposed portions of the bottom antireflection coating are substantially removed.

Claim 11 (original): The method of claim 1, wherein the bottom antireflection coating forms a protective barrier over metal structures at the exposed surface of the active image sensing device structure during formation of the color filter array.

Claim 12 (original): The method of claim 1, wherein the active image sensor device structure comprises a complementary metal-oxide-semiconductor (CMOS) image sensor.

Claims 13-20 (canceled)

Claim 21 (new): The method of claim 1, wherein:

the active image sensing device structure comprises an array of light sensing elements;

forming the color filter array comprises forming an array of color filters each disposed over a respective light sensing element such that light travels from each color filter to a respective light sensing element through a respective light transmission path substantially transmissive to radiation in a visible wavelength range;

forming the bottom antireflection coating comprises forming the bottom antireflection coating with a thickness less than approximately 200 nm; and

after the removing, remaining portions of the antireflection coating are disposed in each light transmission path between the color filter array and the active image sensing device structure.

Claim 22 (new): The method of claim 1, wherein, after the removing, the bottom antireflection coating is present only in regions directly under color filter array material.

Claim 23 (new): The method of claim 1, wherein the bottom antireflection coating has a thickness of about 60 nm.